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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,579	02/09/2004	Igor Y. Botvinnik	SHPR-01436US0	9762
29190	7590	08/26/2005	EXAMINER	
BELL, BOYD & LLOYD LLC P.O. BOX 1135 CHICAGO, IL 60690-1135			CHIESA, RICHARD L	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,579

Applicant(s)

BOTVINNIK, IGOR Y.

Examiner

Richard L. Chiesa

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) 21-81 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Feb. 9, 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species A (Figures 2A and 2B) in the reply filed on July 27, 2005 is acknowledged. The traversal is on the grounds that the applicant is being forced to prosecute a single independent claim and a single embodiment. This is not found persuasive because the examiner merely required an election of one of the ten patentably distinct species as noted in paragraph 3 on pages 2 and 3 of the first Office action (dated June 27, 2005). The applicant has also apparently argued that all of the elected claims 1-20 are generic to all of the species. In order to expedite prosecution the examiner will examine all of the elected claims 1-20.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 21-81 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected species. Applicant timely traversed the election requirement in the reply filed on July 27, 2005.

Drawings

3. The corrected Figure 1A and 1B drawings were received on July 27, 2005. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4, 6-12, 14, 17, and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either one of U.S. Patent Nos. 2,978,066 (Nodolf) or 4,264,343 (Natarajan et al). Each one of Nodolf (note ref. num. 10-15, 20, 23, 24, Figs. 1-3, and col. 1, line 51 to col. 2, line 72) and Natarajan et al (note ref. num. 19-23, Figs. 4, 7, 8, 16, col. 3, line 51 to col. 9, line 12, and col. 12, line 49 to col. 13, line 11) shows an electrostatic precipitator with corona discharge electrodes, at least one pair of collector electrodes, and insulated driver electrodes as claimed (35 USC 102b). It would appear that both Nodolf and Natarajan et al do not explicitly refer to the electrodes between the collector electrodes as driver electrodes. However, both Nodolf and Natarajan et al disclose that these electrodes assist in directing particulates to the collector electrodes. This of course is the well-known function of driver electrodes in the electrostatic precipitator art as even defined by

Art Unit: 1724

applicants in the admitted prior art on pages 1-3 of the specification. Therefore, it is inherent or at least would have been obvious to one having ordinary skill in the art (35 USC 103a) that the electrodes located between the collector electrodes in both the Nodolf and Natarajan et al electrostatic precipitators are indeed driver electrodes.

7. Claims 2, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Nodolf or Natarajan et al in view of U.S. Patent No. 5,993,738 (Goswani). Each one of Nodolf and Natarajan et al, as described above in paragraph 6, discloses an electrostatic precipitator substantially as claimed. It would appear that neither one of Nodolf or Natarajan et al discloses the use of a fan. However, Goswani (note ref. num. 48, Fig. 5) teaches the well-known use of a fan in an electrostatic precipitator for the purpose of producing a stand-alone unit (note col. 6, lines 9-31). Consequently, it would have been obvious to one of ordinary skill in the art to employ a fan in either the Nodolf or Natarajan et al electrostatic precipitators in order to facilitate stand-alone utilization as taught by Goswani.

8. Claims 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Nodolf or Natarajan et al in view of U.S. Patent No. 6,042,637 (Weinberg). Each one of Nodolf and Natarajan et al, as described above in paragraph 6, discloses an electrostatic precipitator substantially as claimed with the apparent exception of a non-electrically conductive ozone reducing catalyst. In any case, Weinberg (note col. 3, line 65 to col. 4, line 3) teaches the use of a non-electrically conductive manganese dioxide ozone reduction catalyst in an electrostatic precipitator for the purpose of producing a safer environment. For this same reason

Art Unit: 1724

it would have been obvious to one of ordinary skill in the art to employ such a catalyst in either one of the Nodolf or Natarajan et al electrostatic precipitators.

9. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Nodolf or Natarajan et al in view of U.S. Patent No. 6,176,977 (Taylor et al). Each one of Nodolf and Natarajan et al, as described above in paragraph 6, discloses an electrostatic precipitator substantially as claimed with the possible exception of wire-shaped driver electrodes. Taylor et al teach the use of wire-shaped driver electrodes (note ref. num. 242, Figs. 4G, 4H) in the collection region of an electrostatic precipitator for the purpose of ensuring symmetrical electric fields (note col. 10, lines 26-38) and for this same reason it would have been obvious to one having ordinary skill in the art to employ such an expedient in either one of the Nodolf or Natarajan et al electrostatic precipitators.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references have been cited as art of interest to show other electrical fluid separation systems.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-0987.

Art Unit: 1724

Facsimile correspondence must be transmitted through (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa

August 23, 2005

Richard L. Chiesa

**RICHARD L. CHIESA
PRIMARY EXAMINER
ART UNIT 1724**

August 23, 2005